UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

FILE
PFE ORIGINAL

SUBJECT: Review of Amtrak Wilmington Refueling SI

DATE: 10-19-94

FROM: Jennifer Hubbard, Toxicologist
Technical Support Section (3HW13)

TO: Maria T. White, SAM
Site Assessment Section (3HW73)

This document has been reviewed, with particular attention to the Toxicological Evaluation, which was submitted separately. The following comments are offered. Page numbers and Appendix numbers refer to the Toxicological Evaluation (TE), not the main body of the SI.

1. Appendix 1, page 3, and throughout the TE: The target screening risk is HQ = 0.1, not 1, to take into account potential additive effects. This would result in the addition of antimony to the list of soil chemicals of potential concern. However, antimony would not result in the evaluated pathways exceeding an HI of 1 where they previously did not.

2. Beryllium exceeded the residential RBC in SS-3 but was not included in the chemicals that were quantitatively evaluated. Evaluation of beryllium would add risks greater than 1E-6 but less than 1E-5.

3. Appendix 6: The cancer risk equation is:
cancer risk = $1-e^{(-Dose \times CSF)}$.

4. It is difficult to determine from the SI and TE whether sediment poses a direct-contact human health hazard, because it was not quantitatively evaluated. A recreational scenario would help. As noted in the report, sediment levels exceed on-site soil levels.

5. Table 13: The presence of dibenz[a,h]anthracene, benz[a]anthracene, benzo[b]fluoranthene, chromium, vanadium, antimony, and pesticides in sediment should also be listed, either because of their exceedance of RBCs (at the target risks of 1E-6 and HQ of 0.1) or because of the potential for bioconcentration in aquatic organisms.

6. The food RfD may be used for manganese in soil, although use of the water RfD is more conservative and does not assume a

difference in bioavailability between manganese in water and soil.

7. Appendix 1: It is not clear why the adult trespasser would only trespass for 6 years.

8. Pages 1 and 6: The screening level for lead in soil (since July 1994) is 400 mg/kg.

9. Page 6, 3rd paragraph: Suggest wording change from "any exposure to lead is not desirable" to "it is desirable to minimize lead exposure."

10. Page 6, 5th paragraph: Suggest adding, "Lead in soil in residential neighborhoods above 400 mg/kg merits further evaluation in future efforts; i.e., evaluation of potential blood-lead increases."

11. Page 7, 2nd paragraph under Section 4.1.1.4 and page 9, 5th paragraph: Numbers greater than 1E-4 exceed the upper end of the range.

12. Page 8, 1st paragraph: "Chemical Health Advisory Level" should be defined or deleted.

13. Page 1, 1st paragraph: Suggest wording change from "potential adverse health effects" to "increased cancer risk." Also, "For future child residents, potential noncancer effects could not be ruled out."

14. Page 1, 5th paragraph: Suggest wording change from "due to . . . possible neurological damage" to "because of the lack of an identifiable threshold for lead, a neurotoxicant."

Future evaluation of the site should take into account the following data gaps: evaluation of receptors of surface water and sediment exposure, evaluation of consumers of locally-caught fish, and groundwater.

If you have any questions concerning this review, please contact me at x1309.

cc: David Kargbo (3HW13)
Eric Johnson (3HW13)